

PROPOSED NEW RULE
RULE 518, PREVENTION OF SIGNIFICANT DETERIORATION
STAFF REPORT
10/21/10

Executive Summary

Prevention of Significant Deterioration (PSD) is a federal permitting program for new major stationary facilities and a significant modification to existing major facilities located in areas classified as attainment or in areas that are unclassifiable for any criteria air pollutant. The counterpart of PSD in federal permitting programs is the Title V Federal Operating Permit Program for major sources of pollutants that are in non-attainment of federal National Ambient Air Quality Standards. The PSD permitting program is a pre-construction permit that is currently administered by EPA Region IX for Placer County. There is currently only one PSD permit in Placer County; Sierra Pacific Industries.

With the recent addition of Green House Gases (GHG) as a regulated pollutant, which makes these pollutants subject to federal permitting, EPA Region IX could possibly have a significant increase in PSD permit applications throughout the state. The EPA staff could be overwhelmed with these new permit applications and the delay in processing them could be up to two years. Consequently, EPA is encouraging local air districts to take on PSD permitting responsibility for projects that occur within their jurisdiction. For an air district to take on PSD permitting, the district needs to adopt a PSD permitting rule that mirrors the federal requirements and have that rule ARB and EPA approved for incorporation into the State Implementation Plan (SIP).

The most straightforward way for an air district to take on PSD responsibility is to adopt a rule that incorporates the federal requirements by reference (IBR). CAPCOA has developed a model rule in conjunction with EPA and ARB staff, and the air district engineering managers committee.

Placer County Air Pollution Control District staff is proposing that the Board adopt this CAPCOA model rule with various options in the model rule tailored to the District's specifics.

Discussion

The federal PSD program is detailed in 40 Code of Federal Regulations (CFR) Part 52.21. The details of the PSD program are quite involved. Below are some generalizations as they apply to Placer County.

Who is Subject to PSD Permitting?

A pre-construction PSD permit is required for any new major source or a significant modification of an existing major source of any air pollutant regulated under the Federal Clean Air Act that is not a non-attainment pollutant. Currently in Placer County, the PSD pollutants include PM, PM 10, Carbon Monoxide, Nitrogen Dioxide, Sulfur Dioxide,

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Lead, Fluorides, Sulfuric acid mist, Total reduced sulfur, Reduced sulfur compounds, Greenhouse Gases (GHGs), and other industry specific pollutants, such as those from Municipal Waste Combustors.

A major source is a facility that emits 250 tons per year of an applicable pollutant, except for GHGs which the facility must emit 100,000 tons per year in terms of Carbon Dioxide equivalent units (CO₂e). There are 28 types of industries where a major source is defined as 100 tons per year of an applicable pollutant, with the same exception for GHGs. Only two of these 28 source types are likely to be constructed in Placer County; a fossil-fuel fired steam electric plant or a boiler of over 250 million British Thermal Units (Btu) per hour heat input.

A significant modification of an existing major source is defined as a modification with an increase of as much or more than 100 tons per year (TPY) of Carbon Monoxide, 15 TPY of PM₁₀, 40 TPY of Nitrogen Dioxide or of Sulfur Dioxide, 0.6 TPY of Lead, and 75,000 TPY of GHGs.

With the recent addition of GHG as a pollutant that is subject to PSD regulation, there are three facilities in Placer County that are classified as major sources because of their GHG emissions; Sierra Pacific Industries, Rio Bravo, and Roseville Energy Park. However, these facilities will only have to obtain a PSD permit for GHG emissions if they undertake a modification that will increase their GHG emissions by 75,000 tons per year CO₂e.

What are the Primary Requirements of a PSD Permit?

There are two main requirements to be met before a PSD permit is issued; Best Available Control Technology (BACT) is employed, and an air quality impact analysis is conducted showing that the emissions increase from the source will not cause or contribute to an exceedence of an National Ambient Air Quality Standard (NAAQS) or impact Class I areas such as National Parks.

BACT must be employed on each emissions unit that emits an applicable air pollutant in excess of the significant modification threshold for that pollutant. Because GHGs are a newly regulated pollutant, BACT for GHG has not been thoroughly developed. The most likely PSD source of GHGs would be a fossil-fueled boiler of about 200 million Btu/hr or more operating full time. In this case, BACT would likely result in a fuel efficiency requirement in order to minimize Carbon Dioxide emissions.

An air quality impact analysis can be a very rigorous analysis which compares the background concentration of a pollutant plus the potential to emit of the new emissions units to the NAAQS on an hour by hour basis over the course of a year. In order to determine the background concentration of a pollutant, either a public monitoring site nearby which has collected three to five years of ambient data, or one year of site-specific monitoring is required where the pollutant concentration and weather data is collected on an hourly basis. If there are other facilities with issued Authorities to Construct that have not begun

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operation at the time of the site monitoring, the potential to emit of these other facilities must be added to the background concentration.

If the air quality impact analysis shows an exceedence of the NAAQS, additional emission controls or operational limitations must be imposed to prevent the exceedence. If there is still concern that the NAAQS may be exceeded, post-project air quality monitoring may be imposed on the applicant.

The federal regulations impose a maximum amount of concentration that a single source can increase the ambient air concentration regardless of whether the NAAQS is exceeded or not. This is called an ambient air increment and is different for each pollutant and is measured in micrograms per cubic meter.

There are no NAAQS or ambient air increment established for GHGs, therefore the air quality impact analysis is not required for GHGs.

What are the Possible Benefits of the District Taking on PSD Permitting?

For a source within the District that is planning a new major facility, or an existing major facility planning a significant modification, the time to obtain a PSD permit from EPA under the current situation could take several years. If the District were to have PSD authority, then the permit process time would likely be much shorter.

When EPA is the permitting authority for a PSD permit, then the federal Fish and Wildlife Service and the National Marine Fisheries Service must be consulted regarding the Endangered Species Act (ESA) requirements because issuance of the PSD permit is considered a federal action. If the air district is the permitting authority, this consultation is not required, although the source is still required to comply with applicable ESA requirements. However, such impacts may also be considered in CEQA by the lead agency.

Any appeals of a PSD permit issued by EPA are heard by the federal Environmental Appeals Board (EAB) in Washington, DC. Appeals concerning a PSD permit issued by the District are heard by the District Hearing Board. When the District is the permitting authority, appeals are handled locally with more scheduling flexibility.

Fiscal Impact

Adoption of Rule 518 will have an additional fiscal impact on businesses that are proceeding with a new major source or a significant modification of an existing major source of an attainment pollutant. The District is proposing to impose an initial PSD permit filing fee and then charge actual expenditures in issuing the permit on a time and materials basis. Currently, EPA does not charge any fees for processing a PSD permit because EPA is funded with taxpayer dollars.

The actual labor hours required to process the PSD permit are estimated to be approximately the same as for processing a Title V permit. For Title V permits, the

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District advises applicants that the time required is approximately 68 hours. However, this could vary considerably depending on the level of public and EPA participation in the process. The loaded labor rate proposed is the Title V labor rate of \$108.25 which is the rate of a Senior Air Quality Engineer loaded with benefit and overhead costs. This nominal labor cost then is \$7361.

The initial PSD permit filing fee is proposed to be the same as the Title V permit filing fee. This filing fee is currently \$1070.25 and is equivalent to approximately 10 labor hours at the Title V labor rate. These labor hours will be expended in consulting with the applicant for a PSD permit while he is preparing the application. This will involve discussions on Best Available Control Technology, availability of background air monitoring data for the site, possible on-site air and weather monitoring data, and potential requirements for an air quality impact analysis, among other requirements for application content.

Analysis and Findings

The following Analysis and the subsequent Findings are intended to address the requirements set forth in the Health and Safety Code relating to adoption of a new or amended District Rule, as well as other State statutes referenced herein.

Cost-Effectiveness of a Control Measure

California Health & Safety Code (H&S) Section 40703 requires a district to consider and make public “the cost-effectiveness of a control measure”. The adoption of Rule 518 will have an additional cost on the applicant for a PSD permit beyond what that applicant would pay under the current situation where the permit is issued by EPA. The additional cost would be the filing fee plus the actual District hours expended to process the permit, estimated to be \$8433. There should be no difference in emissions from a PSD facility regardless if the permit were processed by EPA or the District, therefore cost-effectiveness cannot be calculated. However, the advantage of the District issuing the PSD permit would be in avoiding a possible EPA backlog that could delay EPA permit issuance by up to two years.

Socioeconomic Impact

H&S Section 40728, in relevant part, requires the Board to consider the socioeconomic impact of any new rule if air quality or emission limits are significantly affected. However, districts with a population of less than 500,000 persons are exempted from the socioeconomic analysis. In 2009, the population of Placer County was approximately 340,000 persons.

California Environmental Quality Act (CEQA)

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Applicants for PSD permits under the proposed rule are already required to obtain PSD permits under the Federal Clean Air Act. The requirements of the permit will be the same whether EPA or the District issues the permit.

California Public Resources Code Section 21159 requires that an environmental analysis of the reasonably foreseeable methods of compliance be conducted. Compliance with the proposed rule is expected to result in reduced emissions to the environment. Therefore, the proposed rule will reduce emissions from sources and will not cause any significant adverse effects on the environment. Staff has concluded that no adverse environmental impacts will be caused by compliance with the proposed rule.

According to the above conclusion, Staff finds that the proposed rule is exempt from the California Environmental Quality Act (CEQA) because 1) it can be seen with certainty that there is no possibility that the activity in question may have a significant adverse effect on the environment (CEQA Guidelines §15061(b)(3)) and 2) it is an action by a regulatory agency for protection of the environment (Class 8 Categorical Exemption, CEQA Guidelines §15308).

Findings

- A. **Necessity** – The adoption of Rule 518 is necessary in order for a potential applicant for a PSD permit to avoid an unacceptably long wait of up to two years for EPA to process the permit application and issue a PSD permit.
- B. **Authority** – California Health and Safety Code, Sections 40000, 40001, 40701, 40702, and 40716 are provisions of law that provide the District with the authority to adopt this rule.
- C. **Clarity** – There is no indication, at this time, that the proposed rule is written in such a manner that persons affected by the rule cannot easily understand them.
- D. **Consistency** – The regulation is in harmony with, and not in conflict with or contradictory to, existing statutes, court decisions, or state or federal regulations.
- E. **Non-duplication** – The regulation does not impose the same requirements as an existing state or federal regulation.
- F. **Reference** – All statutes, court decisions, and other provisions of law used by PCAPCD in interpreting this regulation is incorporated into this analysis and this finding by reference.